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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/527,410	03/16/2000	Bing Lin Yang	YKI-0034	1559

23413 7590 10/14/2004

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EXAMINER
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EASTHOM, KARL D

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/527,410

**Applicant(s)**

YANG, BING LIN

**Examiner**

Karl D Easthom

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 5, 8-9, 13, 15, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones. Jones discloses sealing spacers 4,5 fixed on the lead portion of terminals 10,11, on one piece cylindrical housing 3, the sealing spacer fixed airtightly at said housing at said interior around the portion where metal 6 resides on the interior of the housing. The tips of c are broadened with a projected surface. The extent of penetration of the electrodes is limited by the chamfered caps as noted at col. 1, lines 55-65. This renders the distance as varied and set as desired up to that limit. In claim 2, the welding is by way of metal 6 or by heating 5,6. In claim 8 there is a mixture of gas and air since the air cannot be all discharged, and the gas is "insert" since it has been inserted. In claims 5 and 9, the shape is cylindrical. In claim 13, the projection is "substantially conical" where the term is one of degree and the surface looks like a cone that is not pointy. In claim 15, col. 1, line 70 discloses spherical end sections which would include a semi-spherical portion.

3. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Nobuya (abstract submitted by applicant). Nobuya discloses the claimed invention at the sole figure and abstract with sealing spacers 13 fixed on the lead portion of terminals 11, with one piece cylindrical housing 14. In claim 2, the broadened electrode 12 is projected or patterned to from a large piece that is square in cross section as depicted. The spacers are fitted and fixed on the lead

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portion 11 indirectly through the broad tip 12. The spacers are adjustable to the final position seen or other position.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 are rejected under 35 U.S.C. 103(a) as obvious over Odo in view of Gerth. Odo discloses the claimed invention except both leads being adjustable and sealing spacers on both electrodes. Odo at Fig. 1 discloses leads 7, 16, w broadened tips 10, 17, sealing spacers 13, and one piece housing 16. Gerth discloses sealing spacers 20, 18 for easy adjustment of two leads at Fig. 3, . For claim 2, the sealing spacers are not discloses as welded, but welding, brazing or soldering is disclosed at col. 2 of Gerth as a suitable manner for making a gas tight seals, and discloses sealing the spacers at col. 2, lines 38-65, so that welding would have been an obvious method of sealing

6. Claims 3-4 and 12 are rejected under 35 U.S.C. 103(a) as obvious over Jones in view of Kozlowski. The claimed invention is as noted above except the inert gas and clean dry air. Kozlowski discloses repeated backfilling and flushing which would inherently results in the cleanliness claimed, col. 3, lines 5-20. Jones discloses hermetic sealing and using gas filling at col. 2. It would have been obvious to backfill and flush until the desired cleanliness is obtained and to use the inert gas and clean air where repeated flushing for cleaning is disclosed, for the purpose of getting the air as clean as possible.

7. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as obvious over Jones in view of Kawiecki, Hill et al. '154 or Lange et al. '260. The claimed invention is disclosed except for the grid pattern. Kawiecki discloses such a pattern 30 at fig. 5 to inhibit electrode erosion and to hold electrode material, as does Lange at Figs. 1-3 for holding discharge material at col. 2, as does Hill as seen at Fig. 2 as 3E, 5E, such that it would have been obvious to provide such a pattern for the purpose noted in the Jones device.

8. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as obvious over Jones in view of Zuk. The claimed invention is disclosed except for the conical delimiting pattern. Zuk discloses such a pattern at Fig. 2 for the purpose of controlling the gap width - see col. 2. . It would have been obvious to employ the pattern for the purpose of controlling the gap width.

9. Claims 6-7 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Harada et al. The noted reference discloses the claimed invention except for the lead wires being Dumet. Harada et al. discloses such a lead wire at col. 6 for the purpose of forming leads that penetrate glass. It would have been obvious in view of Harada et al. to form lead wires of Dumet for penetrating the glass of the references noted

10. Applicant's arguments filed 1/12/04 have been fully considered but they are not persuasive. Applicant argues that the distance between electrodes cannot be varied and set as desired. This is not correct. The extent of penetration of the electrodes is limited by the chamfered caps as noted at col. 1, lines 55-65. This renders the distance as varied and set as desired up to that limit. Applicant argues that the chamfered caps fixes the distance. This may be correct at the limit, but until that limit, there is adjustability since the device need not be employed at the limit. Applicant argues that the device is not airtight. This is contrary to the

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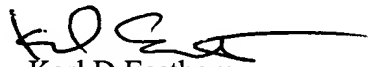
disclosure of hermetically sealed gas filled. Applicant argues that the spacers are not fixed to the electrodes because they are fixed to another part. This is not correct as all parts are fixed together. Also, the lead portions are the portions that are not the electrodes C. As to Jones not having a projected surface, this is not correct where the surface C is clearly projected from a plane. As to the predetermined distance not disclosed, this is not correct, the distance was predetermined before the device was manufactured in the manner it is. Applicant states that Lange discloses a waffling, or combing, or plurality of rings which is not a grooved grid pattern. This is not correct, for such a waffling or honeycombing is indeed a grooved grid pattern. Applicant makes no argument as to why the pattern is not met. As to Kawiecki, the pattern is also seen as a grooved grid as noted as 30 at Figs. 2, 4 and 5. AS to Hill the pattern is seen clearly at Fig. 2. As to Zuk, the broadened tip includes a projected portion delimiting the conical cavity at Figs. 1-2 as seen, and applicant makes no argument why the limitation is not met, only assertions that they are not. The "teaching away" argument is not applicable to a 35 USC 102 rejection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (272) 571-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (272) 571-1989. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom  
Primary Examiner  
Art Unit 2832

KDE